REMARKS/ARGUMENTS

I. Introduction:

Claims 4-6, 8, 13-16, 22-24, 26, 34-48, and 52-60 are amended, claims 1-3, 19-21, 31-33, 49-51, and 61-64 are canceled, and claims 65-74 are added herein.

With entry of this Amendment, claims 4-18, 22-30, 34-48, 52-60, and 65-74 will be pending.

Applicants acknowledge the allowance of claims 4-7, 8-12, 22, and 26-30, if rewritten to overcome any pending rejections under 35 U.S.C. 112.

New claims 65 and 69-71 are apparatus claims generally corresponding to claim 4. New claims 66 and 72-74 are apparatus claims generally corresponding to claim 8. New claims 67 and 68 are apparatus claims generally corresponding to claims 22 and 26, respectively. Accordingly, new claims 65-74 are believed to be in proper form for allowance.

II. Drawing Objections:

In objecting to the drawings, the Examiner states that elements of claims 4 and 8 are not shown in the drawings. Applicants respectfully submit that the drawings show every feature of the claims.

Claim 4 is directed to a method for operating a first path computation element in a first autonomous system to participate in establishing an inter-autonomous system Traffic Engineering Label Switched Path between a head-end node and a tail-end node. Fig. 1 illustrates an inter-Autonomous System path computation scenario. Three Autonomous Systems (AS1, AS2, and AS3) are shown and a path is to be computed between a head-end node 102 and a tail-end node 104. A number of path computation elements (ASBR1, ASBR8, ASBR, etc.) are shown.

Fig. 2 is a flowchart describing steps of computing of an inter-AS MPLS Traffic Engineering LSP. At step 210 information specifying a virtual shortest path tree (VSPT) is sent from the first path computation element to the second path computation element. The VSPT is a shortest path tree rooted at the tail-end node and extending to one or more border routers linking the first autonomous system and the second autonomous system (see also Figs. 1 and 3A-3D)). Steps 214-216 refer to computations performed on the received VSPT information. At step 218 the path computation element sends information identifying the revised virtual shortest path tree to head-end via a path computation element in a third autonomous system (see Fig. 1).

With regard to claim 8, step 202 of Fig. 2 describes transmittal of a path computation request message from a head-end node to a path computation element. Step 204 describes transmitting the request to other path computation elements. Step 210 describes transmittal of VSP information to a path computation element.

Details of a method as set forth in claims 4 and 8 are also shown in figs. 3A-3D which depict evolution of a virtual shortest path tree across multiple Autonomous Systems. (See description of Figs. 1 and 3A-3D at page 13, line 9 – page 15, line 7 of specification.)

Applicants therefore submit that the drawing objections should be withdrawn.

III. Claim Objections:

Claims 4, 8, 13, 16, 22, and 26 have been amended as suggested by the Examiner.

IV. Claim Rejections – 35 U.S.C. 112:

Claims 5 and 6 have been amended to refer to the one or more border routers linking said first autonomous system and the third autonomous system.

Claim 15 has been amended to refer to the one or more border routers connected in both the first area and the third area.

Claims 23 and 24 have been amended to refer to the one or more border routers linking the first autonomous system and the third autonomous system.

The Examiner states with regard to a number of the claims that is it unclear what is meant by "a path of said MPLS Traffic Engineering LSP". This terminology is clearly described in the specification. For example, the Background of the Invention describes how MPLS Traffic Engineering exploits modern label switching techniques to build guaranteed bandwidth end-to-end tunnels through an IP/MPLS network of label switched routers. These tunnels are a type of label switched path (LSP) and thus are generally referred to as *MPLS Traffic Engineering LSPs* (see, page 1, lines 7-12 of the specification). The Background further describes how establishment of an MPLS Traffic Engineering LSP from an LSP head-end to an LSP tail-end involves computation of a path through the network of LSRs and it is desirable to extend MPLS Traffic Engineering LSPs across AS boundaries. The specification further describes in detail how to compute the path of an MPLS Traffic Engineering LSP through Autonomous Systems and areas. Establishment of an LSP involves computation of a path, signaling along the path, and modification of forwarding tables along the path. Fig. 2, for example, describes steps of computing a path of an MPLS Traffic Engineering LSP across multiple Autonomous Systems in accordance with one embodiment. It is therefore submitted that use of the phrase "MPLS Traffic Engineering LSP" or "path of said MPLS Traffic Engineering LSP" is clearly defined by the specification and corresponding drawings.

Claims 5 and 6 have been amended to refer to "said one or more border routers".

Claim 14 has been amended to replace "said head-end node of said path" with --said head-end node--.

V. Claim Rejections – 35 U.S.C. 101:

Claims 31-60 have been amended to refer to a computer readable storage medium encoded with a computer program product for storing computer executable codes.

Claims 31-60, as amended are believed to comply with the requirements of 35 U.S.C. 101.

VI. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,

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